

Application for DENR Funding Assistance for Wastewater and Drinking Water Projects

To be submitted in TRIPLICATE

DATE RECEIVED:

(To be filled in by the State)

See INSTRUCTIONS before completing application

ACCOUNT

SECTION I – REQUEST FOR FUNDING

1. Contact Information

Applicant	Engineer
City of Asheville Water Resources (Name of Board, Council or Owner – the Applicant)	Brown and Caldwell (Name of Engineering Firm)
Gary W. Jackson, City Manager (Name and Title of Authorized Official)	Leslie Jones (Name of Engineer of Record)
P.O. Box 7148, 70 Court Plaza (Street or Box Number)	309 East Morehead St, Ste. 160 (Street or Box Number)
Asheville, NC 28802 (City, State & ZIP)	Charlotte, NC 28202 (City, State & ZIP)
Buncombe (County)	
(828) 259-5602 (Phone Number)	(704) 358-7204 (Phone Number)
(828) 259-5499 (FAX Number)	(704) 358-7205 (FAX Number)
gjackson@ashevillenc.gov (E-mail address)	lcjones@brwnncald.com (E-mail address)
56-6000224 (Federal ID Number)	

2. Project Information:

(a) Name of Project

Pumping System Installs to Reduce Energy

(b) Description of Project

Replacement of the North Fork WTP High Service, Black Mountain, and Mills River WTP High Service Pumping Stations.

(c) Type of Project – check all that apply

- ☐ Wastewater Treatment
☐ Water Reclamation or Land Application Facilities
☐ Wastewater Collection

- ☐ Drinking Water Source
☒ Drinking Water Treatment
☐ Drinking Water Transmission or Distribution
☐ Drinking Water Storage

3. Funding type and amount requested by this application - show details in Section II.

Total Loan Requested N/A

Total Grant requested \$510,000.00

4. Certification

The attached statements and exhibits are hereby made part of this application, and the above-named **Authorized Official** certifies that the information in the application and the attached statements and exhibits is true, correct, and complete to the best of his knowledge and belief. He further certifies that: He has been authorized to file this application by formal action of the governing body of the **Applicant** as is evidenced by the ATTACHED CERTIFIED COPY OF AUTHORIZATION MADE BY THE APPLICANT'S GOVERNING BODY; the governing body of the **Applicant** agrees that if a loan or grant for the Project is made pursuant to N.C.G.S 159G, the Water Infrastructure Act of 2005, and the Federally Funded State Revolving Fund Programs (SRF), the **Applicant** will provide proper and efficient operation and maintenance of the approved Project after completion of construction thereof; and the **Applicant** has substantially complied or will substantially comply with all Federal, State, and local laws, rules, regulations, and ordinances applicable to the Project. **Applicant** will adopt and place into effect on or before completion of the project a schedule of fees and charges that will provide adequate funds for proper operation, maintenance, administration of the system, and repayment of all principal and interest on loans.


(Signature of Authorized Official)

February 25, 2009
(Date Signed)

SECTION II - FINANCIAL INFORMATION AS OF DATE OF APPLICATION

1. Financing construction of project:

Source	Amount	
(a) Funds to be made available by the Applicant:		
Cash.....	_____	
General Obligation Bonds.....	_____	
Revenue Bonds.....	_____	
(b) Other {specify in 2) below}	_____	
Sub-total (Applicant and Other)	_____	
(c) Federal funding (including SRF) requested by this application		
DWSRF Planning Loan.....	\$500,000.00	× 2% = \$10,000
SRF Loan.....	_____	× 2% = _____
Other Loan.....	_____	_____
Grant.....	_____	_____
Federal Sub-Total	\$500,000.00	
(d) State funding requested by this application		
State Emergency Loan.....	_____	× 2.5% _____
State Revolving Loan.....	_____	× 2.5% _____
High Unit Cost Grant.....	_____	× 1.5% _____
Technical Assistance Grant.....	_____	× 1.5% _____
State Sub-Total	_____	
Total Funding Available	\$500,000.00	Total Fee \$10,000.00

2. Name sources and amounts of other funding, and indicate status of each request

Description	Amount	Status "Applied for" or "offered"
N/A	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

3. Outstanding indebtedness not including loan for this project: \$79,651,410.00

4. Most current total appraised property valuation: \$8,949,390,694.00

SECTION III - ENGINEERING INFORMATION

1. Project cost estimate summary:
Under Item a), list major items of work for which separate contracts are proposed and estimate their cost.

Item	Item Cost
(a) Construction (can specify for each contract)	
(1) <u>North Fork WTP High Service Pumping Station</u>	<u>\$100,000.00</u>
(2) <u>Black Mountain Pumping Station</u>	<u>\$100,000.00</u>
(3) <u>Mills River WTP High Service Pumping Station</u>	<u>\$200,000.00</u>
(4) _____	_____
(5) _____	_____
(6) _____	_____
Construction Sub-total	<u>\$400,000.00</u>
(b) Technical Services <u>Engineering</u>	<u>\$60,000.00</u>
(c) Administrative	_____
(d) Contingency	_____
(10% of projected construction cost, 5% after bid)	<u>\$40,000.00</u>
(e) Other (specify _____)	_____
(f) Site and Other Real Property Interests <u>N/A</u>	_____
Sub total (a) through (f)	_____
(g) Departmental Fee (closing cost) {must match fees reported in Section II.1. (c) & (d), 2% for SRF, 2.5% for state loan, 1.5% for HUC grant, }	<u>\$10,000.00</u>
Total	<u>\$510,000.00</u>

2. (Wastewater Only) Submittal of Final Plans and Specifications to CG&L will place your wastewater project in a higher category for Funding.

(a) Please give the date of submission of final plans and specifications to CG&L:
_____ N/A

(b) If approved by CG&L, give date and permit number:
_____ N/A

3. Under Orders - Please indicate if project is under a mandated time schedule by the SOC, JOC, AOC, or if the project is under moratorium. (If yes, attach copy.)

☐

yes

☒

no

4. Regional Project – Please indicate whether this is a regional project and list the local units involved. (Please provide a copy of the executed intergovernmental agreement or other documentation of agreement.)

☐

yes

☒

No

Local units involved: _____ N/A

309 East Morehead Street
Suite 160
Charlotte, NC 28202

Tel: (704) 358-7204
Fax: (704) 358-7205

February 26, 2009

BROWN AND
CALDWELL

Mr. Robert Griffin
Interim Director, Water Resources Department
City of Asheville
70 Court Plaza
Asheville, North Carolina 28801

131677

Subject: Drinking Water State Revolving Fund (DWSRF) Loan Program
Preliminary Engineering Report for Pumping System
Installations

Dear Mr. Griffin:

Brown and Caldwell is submitting this Preliminary Engineering Report for the construction of three replacement pumping systems for inclusion into the City's application for funding from the American Recovery and Reinvestment Act of 2009 through the Drinking Water State Revolving Fund (DWSRF) Loan Program as administered by the North Carolina Department of Environment and Natural Resources (NC DENR) Public Water Supply Section.

Project Description

The finished water pumping systems at both the North Fork and Mills River Water Treatment Plants (WTP) are some of the largest power consuming installations owned by the City. Three pumping systems were investigated and replacement systems are being designed. Brown and Caldwell estimates that if all three pumping station modifications are constructed, the City will save approximately 1,650,000 kilowatt hours (kwh) annually. This represents annual savings of over \$100,000 assuming average energy costs of 6.5 cents per kwh. Brown and Caldwell is developing the designs, will provide permitting and bidding assistance, and will administer a single construction contract for the installation of the three systems.

The three pumping systems to be improved are:

North Fork High Service Pumping Station

The North Fork High Service pumping station is oversized for the plant water demands currently on the pumps. The existing North Fork High Service Pumps, shown in Figure 1, are rated at 600 gpm and 220 feet of total discharge head (TDH) with 50-HP drivers. These pumps will be retained to provide fire service. A single new pump with a capacity of approximately 200 gpm to meet the current demands will be added adjacent to the existing

pumps and powered from the existing motor control center (MCC) line-up. Variable speed controls will be included on the new pumps and it will operate to maintain a set system pressure.



Figure 1. North Fork High Service Pumps

Black Mountain Pumping Station

The Black Mountain Pumping Station does not serve as large of a distribution area as it originally was designed to supply due to distribution system improvements. The existing Black Mountain pumps, shown in Figure 2, are rated at 3,500 gpm and 165 feet of total discharge head (TDH) with 200-HP drivers. A skid-mounted, duplex pump system with a capacity of approximately 50 gpm to meet the current peak daily demand will be added adjacent to the existing pumps and powered from the existing MCC line-up. Variable speed controls will be included on the new pumps and it will operate to maintain a set system pressure. The existing pumps will be retained to provide fire service.



Figure 2. Black Mountain Pumps

Mills River Pumping Station

The Mills River WTP produces potable water that is provided to Asheville and to additional regional customers via intersystem connections with the City of Hendersonville (Hendersonville). The existing Mills River high service pumps, shown in Figure 3, provide service to the Asheville distribution system which operates at a pressure approximately 100 feet higher than the Hendersonville system. The City routinely delivers 1 mgd to the Hendersonville system via a pressure-reducing valve. Rather than wasting the excess energy through the valve, a duplex pumping station with a firm pumping capacity of approximately 700 gpm will be installed to pump finished water directly to the Hendersonville system. The existing flow meter will be used for feedback control on the new pumps. The pumps will be powered from the existing MCC lineup. The plant's existing SCADA system will also be upgraded to include automation for flow matching and off-peak pumping for better power management. A new automated 24-inch valve along Swannanoa River Road behind Lowes will also be installed at the interconnection between the two large supply mains and connected to the SCADA system so Asheville can optimize the use of the gravity feed from North Fork WTP in lieu of pumping water from the Mills River plant.



Figure 3. Mills River Pumps

Alternatives Analysis

The alternative to providing smaller, more efficient pumps at each of the three locations is to do nothing and continue pumping with the existing pumps at the higher rates and pressures than are needed. This project will enable the City to reduce their overall electrical use at each of these locations.

Cost Estimate

The improvements to the North Fork High Service Pumping Station are estimated at \$100,000, the Black Mountain Pumping Station are estimated at \$100,000, and the improvements at the Mills River Pumping Station, SCADA system and valve is estimated at \$200,000. The total estimated construction cost for all three projects is \$400,000.

Mr. Robert Griffin
February 26, 2009
Page 5

Project Efficiency

As stated in the project description, the existing pumps are some of the largest power consuming installations owned by the City. These three pumping system modifications will reduce the City's electrical energy consumption by an estimated 1,650,000 kilowatt hours (kwh) annually.

Please call me if you have any questions or concerns.

Very truly yours,

BROWN AND CALDWELL



Leslie Jones, P.E., BCEE
Project Manager

LCJ:jml



CERTIFICATE

I, Magdalen Burleson, City Clerk of the City of Asheville do hereby certify that the attached is a true and accurate copy of Resolution No. 09-15 adopted by the Asheville City Council
on January 27, 2009, + found in Resolution Book
No. 31 at page 417

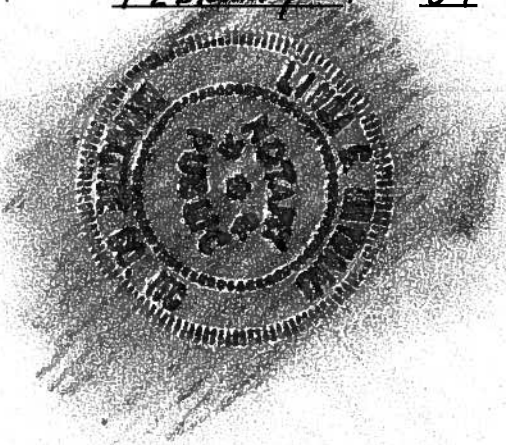
Magdalen Burleson
Magdalen Burleson
City Clerk

STATE OF NORTH CAROLINA
COUNTY OF BUNCOMBE

I, Linda C. Maynard, a Notary Public of the aforesaid County and State do hereby acknowledge that Magdalen Burleson, City Clerk, personally appeared before me this day and acknowledged the due execution by her of the foregoing Certificate.

Witness my hand and notarial seal this 26th day of February, 2009.

Linda C. Maynard
Notary Public
Print Name: Linda C. Maynard
My Commission Expires: 9-14-2009



RESOLUTION NO. 09-15

RECOMMENDATIONS FOR ECONOMIC STIMULUS PACKAGE

WHEREAS, The United States economy entered into a recession in December 2007 and it is widely agreed that economic stimulus is critical; and

WHEREAS, To stimulate the economy, President-elect Barack Obama is working closely with Congress to prepare an economic stimulus package of up to \$1 trillion they hope to pass soon after the President-elect's inauguration; and

WHEREAS, previous stimulus bills have proven most effective if legislation is enacted soon after the recession is identified, funds are spent quickly while unemployment is high and new jobs are created when needed; and

WHEREAS, North Carolina's jobless rate soared in December to 7.9 percent, the highest in 25 years; and

WHEREAS, on December 19th, the North Carolina Metropolitan Mayors Coalition, representing the 26 largest city mayors, released a \$2.8 billion list of shovel-ready public infrastructure projects that will immediately put citizens to work in construction, public safety, office, and retail jobs; and

WHEREAS, academic research indicates that the list of upgrades for roads, public buildings, water systems, and other essential infrastructure would create nearly 100,000 jobs; and

WHEREAS, the most efficient way to distribute federal funding is through existing federal programs; and

WHEREAS, economic stimulus legislation should allow for a substantial role for municipal government, making it as easy as possible for local funding recipients to access and spend stimulus funds;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF ASHEVILLE THAT:

The City of Asheville recommends that Congress consider the following recommendations as it begins work on an economic stimulus package:

1. Include funding for the Economic Development Administration's public works and infrastructure program, and Economic Adjustment assistance
2. Include funding for HUD's Community Development Block Grant Program (CDBG)
3. Include funding for Energy Efficiency and Conservation Block Grant Program (EECBG)
4. Distribute State revolving loan fund dollars as direct grants
5. Do not limit the Corps of Engineers' ability to spend stimulus funds
6. Distribute transportation stimulus funds through the Surface Transportation Program (STP)
7. Include funding for infrastructure improvements to our nation's arts and cultural institutions
8. Include funding for public school systems

mb

9. Include funding for workforce development

FURTHERMORE, BE IT RESOLVED THAT:

The City of Asheville recommends that the State of North Carolina strongly partner with cities when deploying these funds to spur our local economies and choose a wide range of local infrastructure projects that will create long-term positive benefits for our citizens.

Read, approved and adopted this 27th day of January, 2009.

Magdalen Brulson
City Clerk

Greg Bellamy
Mayor

Approved as to form:

R. W. A.
City Attorney